## REMARKS

Applicants thank the Examiner for consideration of the subject patent application. In the previous office action mailed May 17, 2007, Claims 81-102 were pending, and made subject to a restriction requirement under 35 U.S.C. § 121. The applicants have elected the adhesive matrix species of acrylate polymer and the penetration enhancer species of fatty acid esters and lauryl lactate. As such, Claims 81-86, 98, 100, and 102 remain pending. Claims 87-97, 99, and 101 have been previously withdrawn.

CLAIMS

Applicants have currently amended Claim 81 to include administering huperzine to the subject for a duration of at least about 3 days from administration of a single transdermal patch. The support for this amendment can be found on page 7, line 19 through page 8, line 4, and Claim 85. As such, Claim 85 has been canceled. Additionally, Claim 103 has been added, which is directed to attainment of the huperzine blood plasma levels. Support for this claim can be found on page 7, lines 15-18. As such, no new matter has been added.

PRIOR ART

Applicants have submitted a declaration herewith that outlines the delivery results achieved by the huperzine patches of the '715 patent and the '987 patent. Following the teachings of the '715 patent, Applicants attempted to prepare a pH adjusted huperzine matrix patch as discussed therein. Immediately, it became apparent that the concept of adjusting pH is realistically limited to embodiments of the '715 patent which contain an aqueous component in the final formulation. In

fact, as is scientifically well known, pH can only be measured for aqueous environments. Transdermal adhesive matrix patches generally do not contain significant, if any, moisture content, as drug is contained in an adhesive polymer which has been dried and laminated to a backing film. Nevertheless, following the protocols described in the attached declaration, Applicant attempted to create transdermal matrix patches with an adjusted pH as mentioned by the '715 patent.

The resultant patches had a very low flux rate. This is likely due to a phase separation encountered in the system during the attempt to make pH adjustment, see graph on Exhibit A. The phase separation results in non-uniform patch contents which are simply incapable of delivering Huperzine at a rate required to achieve the serum level and duration elements required by the present invention. As further evidence of the inability of the '715 patent technology to provide sustained drug release for a significant period, Applicants have graphed Figure 11 of the '715 patent as daily delivery vs. time, as seen in Exhibit B. The conversion of this data into graphical form shows that the technology of the '715 patent had a daily delivery of drug decreasing linearly over a 7 day period, which also shows that the patch is not designed for sustained delivery, but for immediate release purposes as the linear decrease shows that delivery is not "sustained".

Applicants also tested the Azone patch of the '987 patent. The results of the Azone patch are shown in Exhibit C. The graph clearly shows that the Azone patch has a large initial spike of drug delivery followed by a very rapid decrease. The flux pattern is indicative of Azone's nature to destroy skin layers resulting in an uncontrolled release of huperzine. The amount of huperzine delivered cannot be controlled with Azone as the enhancer and as shown, the delivery rate far exceeds the target levels for the present invention, as well as the safety levels for huperzine. Therefore, effective sustained delivery of huperzine cannot be achieved with the Azone patch.

The '986 patent also does not teach or suggest each and every element of amended Claim 81. While the reference broadly mentions transdermal formulations, nothing teaches or suggests an adhesive matrix patch or the use of specific adhesives for the matrix. Additionally, nothing teaches or suggests the use of permeation enhancers, and nothing suggests those enhancer compounds now recited in the presently pending claims. Furthermore, the '986 patent does not teach or suggest a patch that provides specified huperzine blood plasma levels for a minimum duration from a single transdermal administration. As such, the '986 reference is completely lacking in anything that would lead one of ordinary skill in the art to arrive at the specific transdermal matrix patch formulations now claimed.

Therefore, Applicants submit that neither the '715 patent, the '987 patent, nor the '986 patent teach a huperzine adhesive matrix patch having a permeation enhancer capable of controlled release over at least a three day period. Therefore, the Applicants submit that the currently amended claims are patentable over the '715 patent and the '987 patent, and respectfully request allowance.

## CONCLUSION

If any impediment remains to further examination of the present application after consideration of the above-recited election and remarks, which could be removed during a telephone interview, the Examiner is invited to telephone the undersigned attorney at (801) 566-6633 so that such issues may be resolved as expeditiously as possible.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 20-0100.

DATED this 30th day of August, 2007.

Respectfully submitted,

THORPE, NORTH & WESTERN, LLP

/David W. Osborne/

David W. Osborne
Reg. No. 44,989
8180 South 700 East, Suite 350
Sandy, UT 84070
Telephone: (801) 566-6633
Facsimile: (801) 566-0750